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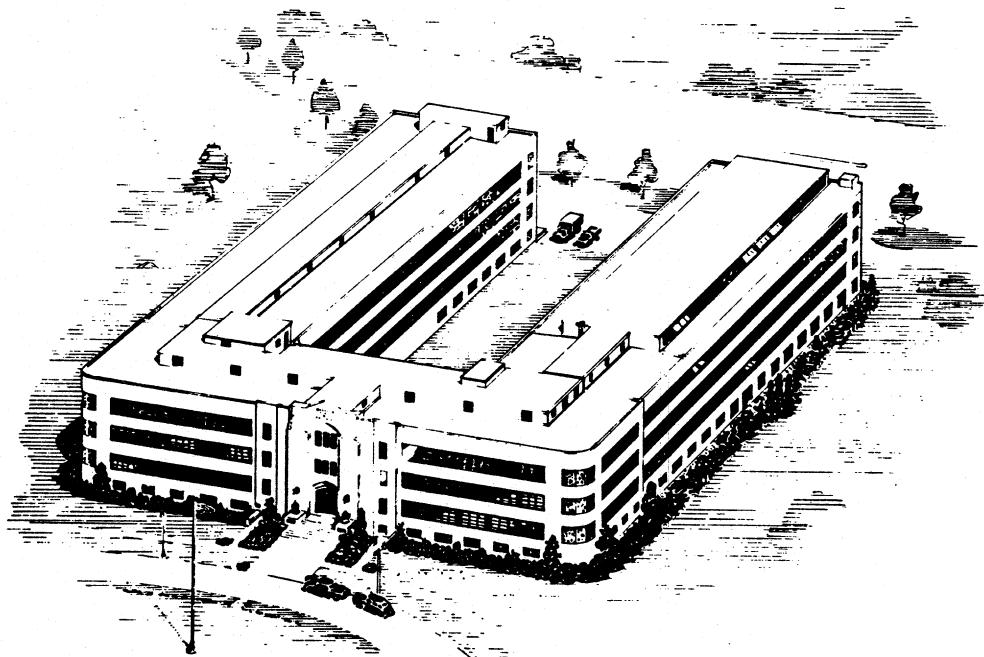
852

STEROIDAL SAPOGENINS, XIII
SUPPLEMENTARY TABLE OF DATA FOR STEROIDAL SAPOGENINS VII

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Eastern Utilization Research Branch

and

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Horticultural Crops Research Branch



Eastern Utilization Research Branch
Philadelphia 18, Pennsylvania

STEROIDAL SAPOGENINS, XV
SUPPLEMENTARY TABLE OF DATA FOR STEROIDAL SAPOGENINS XII
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and

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The screening operations on the first 1000 plant accessions in this project were described in No. VII of this series (J. Amer. Pharm. Assoc., Sci. Ed., 43, 1-7(1954)). That paper gave the background of the project, the collection of plant materials, and the conclusions and generalizations reached. Because of space limitations, the detailed data could not be included. They were published in a supplementary table (Steroidal Sapogenins XIII. AIC-363), obtainable from the United States Department of Agriculture, Eastern Utilization Research Branch, Philadelphia 18, Pa.

The second 1000 samples were covered in No. XII (to be in J. Amer. Pharm. Assoc., Sci. Ed., 43, 503-505 (1954)). The present publication consists of the supplementary table of data for this second 1000 accessions.

CORRECTIONS ON PRESENT LIST

<u>Page</u>	<u>Acces. No.</u>		<u>Page</u>	<u>Acces. No.</u>	
2	1464	A. desertii	20	1637	Indigofera chinense
3	1034, 1108	delete "aff."			var. incarnata
4.	1045	A. edwardii	21	1095	Milla
9	1280	Forchhammeria	23	1604	Intendencia
19	1835	Caesalpinia sappan	30	1209	delete "ligustrina"
			31	1944	Berria

Insert the following:

Page 21

1472 Urginea maritima Torrey Pines, Cal. (cult.) 9/51 1 + 0 + 0 0 0

Page 24

N Y C T A G I N A C E A E

1287	Salpianthus macrodontus	San Bernardo, Son., Mex.	8/51	r - 0	0 0 0 0
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CORRECTIONS ON FIRST 1000 ACCESSIONS (AIC-363)

<u>Page</u>	<u>Acces. No.</u>		<u>Page</u>	<u>Acces. No.</u>	
1	956	Agave sp.	17	958	Dasyliion durangensis
1	767	" sobria	17	962	" simplex
2	306	" fourcroydes	19	155	Nolina microcarpa
2	101	" havardiana	19	961	" juncea
2	102	" "	19	976	" "
2	103	" "	21	156	Yucca baccata
2	104	" "			var. vespertina
3	959	" sp.	21	149	Yucca baccata
4	751	" cerulata			var. vespertina
5	118	" gracilipes	21	203	Yucca arizonica X
5	109	" "			Y. baccata
5	110	" "	22	4-B	Yucca filamentosa
5	112	" neomexicana			var. concava
5	749	" goldmaniana	23	96	Yucca constricta
5	782	" "	23	99	" reverchoni
5	988	" vilmoriniana	23	93	" carnerosana
6	553	" yaquiana	23	150	" schidigera
6	552	" "	23	189	" arizonica X
6	556	" subsimplex			Y. baccata
7	926	" geminiflora	23	191	Yucca baileyi
7	922	" var. atricha	23	194	" elata X
7	967	" patonii	24		Y. glauca
13	940	Dioscorea bartlettii	24	111	Yucca baccata
13	861	Stigmaphyllo humboldt- ianum	24	146	" schottii
15	275	Sansevieria rigid- ifolia (Lili.)	24	147	" "
17	200	Dasyliion wheeleri	24	190	" angustissima
17	201	" "	24	192	" "
			24	193	" "
			24	555	" arizonica

Page 22, Number 842, Yucca filamentosa. Under "sapogenins
identified" it should be 0.2% total; k60, y40.

TABLE I. SAPogenins AND OTHER CONSTITUENTS FOUND IN THE PLANT COLLECTIONS

Code for sapogenins (the suffix "genin" omitted):-

c - chloro	dm - 9-dehydromano	mk - marko
d - dios	g - gitto	sm - smilla
dh - 9-dehydroheco	h - heco	ss - sarsasapo
m - mano	ss - sarsasapo	t - tigo

Code for source names:-

C. G. F. - U. S. Plant Introduction Garden,
Chico, Cal. - U. S. Plant Introduction Garden,
G. D. M. - U. S. Plant Introduction Garden,
Hunt. Bot. Gard. - Huntington Botanic Garden,
Pasadena, Cal. (cult.).

Collection

Sapogenins

Accession No.	Species	Source	Date	Hemo-	Total	Identified	Flavo-	Alka-	Tan-	Ster-
			Collected	ysis	% f. b.	% of Total	nols	loids	nins	ols
A C A N T H A C E A E										
1951	Asystasia gangetica	C. G. F.	11/51	1, fr	~	0	0	0	0	+++
A C E R A C E A E										
1126	Acer buergerianum	Chico, Cal.	8/51	1	+	0	0	0	+	+++
1554	" carpiniifolium	G. D. M.	9/51	1	+	0	0	0	+	0
1551	" miyabei	" "	9/51	1	+	0	0	0	++	+
1560	" rubrum	" "	9/51	1	+	0	0	0	+	0
1811	" ruf nerve	" "	10/51	1	-	0	0	0	+	++
1265	" truncatum	Chico, Cal.	8/51	1	+	0	0	0	+	++
A L I S M A T A C E A E										
1072	Sagittaria latifolia	Beltsville, Md.	8/51	r	+	0	0	0	0	+
1081	Var. pubescens	" "	8/51	1	+	0	0	0	0	++
	Sagittaria latifolia									
	Var. pubescens									

Other Codes:-

mi - micro screening test
ni - not identified
nss - not sufficient sample
tr - trace

b - bark	l - leaf	t - tuber
bu - bulb	r - root	tw - twig
fl - inflorescence	rh - rhizome	w - whole plant
fr - fruit	s - stem	wd - wood
ib - inflorescent bud	sd - seed	y - young

TABLE I. CONT. - PAGE 2

			A M A R A N T H A C E A E	
1382	<i>Amaranthus hybridus</i>	Raleigh, N. C.	9/51 f1 + 0 0 0	0 0 0 0 0
1590		Beltsville, Md.	10/51 w, fr + 0 0	0 0 0 0 0
				+ + + + +
			A M A R Y L L I D A C E A E	
1731	<i>Agave albicans</i>	Hunt. Bot. Gard.	10/51 1 - 0 0	0 0 0 0 0
1751	" <i>americana</i>	" "	10/51 1 - 0 0	0 0 0 0 0
	var. <i>striata</i>	" "	10/51 1 + 0 0	0 0 0 0 0
1778	<i>Agave asperima</i>	" "	10/51 1 + .6 mi t ?	0 0 0 0 0
1765	" <i>atrovirens</i>	" "	10/51 1 + .85 mi h ?	0 0 0 0 0
				+ + + + +
1720	" <i>attenuata</i>	" "	10/51 1 + 0 0	0 0 0 0 0
	" <i>aurea</i>	E. of La Paz, B.C., Mex.	11/51 1 + 0 0	0 0 0 0 0
1800	" "	25 mi. N.W. of La Paz, B.C., Mex.	11/51 1 + 0 0	0 0 0 0 0
1822	" "	Comondú, B. C., Mex.	11/51 1 + .55 h 100	0 0 0 0 0
				+ + + + +
1871	" <i>bovicornuta</i>	Alamos, Son. Mex.	8/51 1 - 0 0	0 0 0 0 0
1872	" <i>brachystachya</i>	Hunt. Bot. Gard.	10/51 1 - 0 0	0 0 0 0 0
	brandegeei	San José de Cabo, B.C., Mex.	11/51 1 + .5 h70;t20;c10	0 0 0 0 0
1813	" "	Cabo San Lucas, B.C., Mex.	11/51 1 + .4 t65;t35	0 0 0 0 0
1817	" "	" "	11/51 1 + .8 h80;t20	0 0 0 0 0
				+ + + + +
1820	" "	Las Cuevas, Cape Dist., B.C., Mex.	11/51 1 - 0 0	0 0 0 0 0
1825	" "	Hunt. Bot. Gard.	10/51 1 + 0 0	0 0 0 0 0
				+ + + + +
1724	" <i>cantala</i>	" "	10/51 1 + .6 mi sm ?	0 0 0 0 0
	<i>carcharolodonta</i>	" "	10/51 1 + 0 0	0 0 0 0 0
1772	" <i>celsii</i>	" "	10/51 1 + 0 0	0 0 0 0 0
1773	" "	" "	10/51 1 + 0 0	0 0 0 0 0
				+ + + + +
1865	" <i>cerulata</i>	San Ignacio, B.C., Mex.	11/51 1 + .35 h64;t17;m11;g8	0 0 0 0 0
1868	" "	Laguna Seca Chapala, B.C., Mex.	11/51 1 + .1 h;dh;m;dm	0 0 0 0 0
		Laguna "	11/51 1 + 1.1 dm45;n20;t;dh	0 0 0 0 0
1884	" "	" "	11/51 1 + 0 0	0 0 0 0 0
				+ + + + +
1719	" <i>chiapensis</i>	Hunt. Bot. Gard.	10/51 1 - 0 0	0 0 0 0 0
1026	" <i>chrysantha</i>	Superior, Ariz.	7/51 w + .25 h90;m10	0 0 0 0 0
1814	" <i>datylio</i>	La Paz, B.C., Mex.	11/51 + .5 h 100	0 0 0 0 0
1821	" "	5 mi. S. of La Paz, B.C., Mex.	11/51 + 0 0 0 0	0 0 0 0 0
		La Paz, B.C., Mex.	11/51 + 0 0 0 0	0 0 0 0 0
1874	" <i>decipliens</i>	Hunt. Bot. Gard.	10/51 + 0 0 0 0	0 0 0 0 0
1752	" "	" "	0 0 0 0 0	0 0 0 0 0
				+ + + + +
1464	" <i>deserti</i>	Sta. Rosa Mt., Cal.	9/51 f1 + .6 mi h	0 0 0 0 0
1463	" " var.	" "	9/51 fr + 0 0 0 0 0	0 0 0 0 0
1465	" "	" "	9/51 sp,fr + .6 mi h70;t20;m5;g5	0 0 0 0 0
1466	" <i>difformis</i>	Hunt. Bot. Gard.	10/51 + .7 mi sm ?	0 0 0 0 0
1750	" "	" "	0 0 0 0 0	0 0 0 0 0
				+ + + + +
1003	" <i>expansa</i>	Tumacacori, Ariz.	7/51 1 + .1 h 100	0 0 0 0 0
1767	" <i>ererox</i>	Hunt. Bot. Gard.	10/51 s - 0 0 0	0 0 0 0 0
1758	" <i>filiifera</i>	" "	10/51 + .5 mi	0 0 0 0 0
1761	" <i>fourcroydes</i>	" "	10/51 + 0 0 0 0	0 0 0 0 0
1779	" "	" "	0 0 0 0 0	0 0 0 0 0

TABLE I. CONT. - PAGE 3

Collection

Saponinins

Accession No.	Species	Source	Date collected	Plant part	Hemolysis test	Total m.f.b., %	Identified, % of Total	Flavonoids	Tannins	Alkaloids	Sterols
A M A R Y L L I D A C E A E											
S a p o o n i n s											
1714	<i>Agave franceschiana</i>	Hunt. Bot. Gard.	10/51	1	-	0	+	0	0	0	+
1730	<i>franzosini</i>	"	10/51	1	-	0	+	0	0	0	+
1867	<i>goldmaniana</i>	Vic. Marmolita, B.C., Mex.	11/51	f	+	25	h55, g28, m17	0	0	0	0
1881	"	Punta Prieta, B.C., Mex.	11/51	1	+	0	0	0	0	0	0
1880	"	"	11/51	1	+	0	0	0	0	0	0
1723	<i>grandidentata</i>	Hunt. Bot. Gard.	10/51	1	+	9	m1	0	0	0	0
1746	<i>lippophantha</i>	"	10/51	1	+	0	0	0	0	0	+
1769	var. <i>pallida</i>	"	10/51	1	+	0	0	0	0	0	+
1268	<i>mayoensis</i>	San Bernardo, Son., Mex.	8/51	1	+	1.3	m1	0	0	0	+
1034	aff. <i>mescali</i>	S.W. of Jacocotan, Mex.	7/51	1	-	0	0	0	0	0	+
1108	"	Autlan, Jal., Mex.	8/51	1	-	0	0	0	0	0	+
1504	<i>nelsonii</i>	San Fernando, B.C., Mex.	9/51	1	+	2	h50, m15, dh20,	0	0	0	0
1505	"	"	9/51	1	+	1.2	m15	0	0	0	0
1510	"	"	9/51	1	+	1.2	m50, dm0	0	0	0	0
1515	"	"	9/51	1	+	1.2	h50, dh25, m3	0	0	0	0
1513	"	"	9/51	1	+	1.6	h50, dh3, h13	0	0	0	0
1512	"	"	9/51	1	+	1.0	h58, dh22, m9	0	0	0	0
1721	<i>nudis</i> <i>oblongata</i>	Hunt. Bot. Gard.	10/51	1	+	0	dm?	0	0	0	0
1757	"	"	9/51	1	+	0	0	0	0	0	0
1006	<i>palmeri</i>	20 mi. f. from Nogales, Ariz.	7/51	5	+	0	0	0	0	0	+
1005	"	21 mi. W. of Wicken, Ariz.	7/51	1	+	0	0	0	0	0	+
1009	"	20 mi. W. of Wicken, Ariz.	7/51	1	+	0	0	0	0	0	+
1022	<i>parryi</i>	Flagstaff, Ariz.	7/51	1	+	2	h100	0	0	0	0
1756	<i>polyantha</i>	Hunt. Bot. Gard.	10/51	1	+	0	0	0	0	0	0
1270	<i>pringlei</i>	Alamos, Son., Mex.	8/51	1	+	0	0	0	0	0	+
1793	<i>promontorii</i>	Sierita Lagoon, B.C., Mex.	11/51	1	+	3	h55, h15	0	0	0	0
1798	<i>regeliana</i>	Hunt. Bot. Gard.	10/51	1	+	0.5	h90, m1, dm10	0	0	0	+
1753	<i>roseana</i>	Pta. Frailes, Cape Dist., B.C., Mex.	11/51	1	+	6	h93, g5, m2	0	0	0	+
1794	"	"	11/51	1	+	0	0	0	0	0	+
1797	"	Isla Gallo, Gulf of Cai., Mex.	11/51	1	+	0.7	h40, t35, g15, m10	0	0	0	0
1816	"	Espiritu Santo Island, Gulf of Cai., Mex.	11/51	1	+	6	h57, t42	0	0	0	0
1819	"	Isla Grijalva, Gulf of Cai., Mex.	11/51	1	+	2	h60, t40	0	0	0	+
1740	<i>rubescens</i>	Hunt. Bot. Gard.	10/51	1	+	2	m1	0	0	0	+

TABLE I. CONT. - PAGE 4

AMARYLLIDACEAE

1754	Agave	salmiana	Hunt.	Bot.	Gard.	10/51	1	-	0	0	0	0	0	
1776	"	sartorii	"	"	"	10/51	1	-	0	0	0	0	0	
1015	"	schidigera	Sin.	"	Mex.	7/51	1	+	•15	t84;c8;98	0	0	0	
1106	"	aff. schidigera	Autlan,	Jal.	Mex.	8/51	1	+	1.0	t75;925	0	0	0	
1882	"	sebastiana	Picachos de Sta. Clara,	B.	C., Mex.	11/51	1	+	0	0	0	0	0	
1511	"	shawii	Socorro,	B. C.,	Mex	9/51	f1	+	•56	h40;m60	0	0	0	
1728	"	"	Hunt.	Bot.	Gard.	10/51	1	-	0	0	0	0	0	
1755	"	sisalana	"	"	"	10/51	1	-	0	0	0	0	0	
1743	"	striata	"	"	"	10/51	1	+	0	0	0	0	0	
1712	"	stricta	"	"	"	10/51	1	+	•2 mi	0	0	0	0	
1818	"	sullivani	El Triunfo,	Cape	Dist.	11/51	1	+	•1	h70;t30	0	0	0	
1745	"	"	B. C.,	Mex.	"	10/51	1	-	0	0	0	0	0	
1027	"	tequilana	Hunt.	Bot.	Gard.	Queens Creek Canyon,	w	+	•9	h65;m30;95	0	0	0	
1262	"	toumeyana	Ariz.	"	"	7/51	1	+	0	0	0	0	0	
1766	"	univittata	Chico, Cal.	"	"	8/51	1	+	•5 mi	0	0	0	0	
1010	"	vexans	Hunt.	Bot.	Gard.	10/51	1	+	0	0	0	0	0	
1736	"	"	Comondú,	B. C.,	Mex.	11/51	1	+	•4	h50;m49;dmtr	0	0	0	
1775	"	victoriae-	Hunt.	Bot.	Gard.	10/51	1	+	0	0	0	0	0	
1737	Agave	reginae	"	"	"	10/51	1	+	•3 mi	g70;m20;dm10	0	0	0	
1054	"	vilmoriniana	Highlands,	N. C.	"	8/51	w	+	1.2	0	0	0	0	
1016	"	virginica	Hunt.	Bot.	Gard.	10/51	1	+	0	0	0	0	0	
1020	"	sp.	Dur.,	Mex.	"	7/51	1	+	0	0	0	0	0	
1028	"	sp.	Nay.,	Mex.	"	7/51	1	+	0	0	0	0	0	
"	"	sp.	8 mi. W. of Compostela,	"	"	7/51	1	+	0	0	0	0	0	
"	"	sp.	Nay.,	Mex.	"	7/51	1	+	0	0	0	0	0	
1038	"	sp.	Mazatan,	Nay.,	Mex.	7/51	1	-	0	0	0	0	0	
1039	"	sp.	8 mi. W. of Compostela,	"	"	"	"	+	0	0	0	0	0	
"	"	sp.	Nay.,	Mex.	"	7/51	1	+	0	0	0	0	0	
1045	"	sp.	Mex.	"	"	8/51	1	-	•95	sm 100	0	0	0	
1733	"	sp.	Hunt.	Bot.	Gard.	10/51	1	-	0	0	0	0	0	
1744	"	sp.	"	"	"	10/51	1	+	0	0	0	0	0	
1748	"	sp.	Hunt.	Bot.	Gard.	10/51	1	+	0	0	0	0	0	
1749	"	sp.	"	"	"	10/51	1	+	0	0	0	0	0	
1758	"	sp.	"	"	"	10/51	1	+	0	0	0	0	0	
1759	"	sp.	"	"	"	10/51	1	+	0	0	0	0	0	
1760	"	sp.	"	"	"	10/51	1	+	0	0	0	0	0	
1762	"	sp.	"	"	"	10/51	1	+	0	0	0	0	0	
1764	"	sp.	"	"	"	10/51	1	+	0	0	0	0	0	
1774	"	sp.	"	"	"	10/51	1	+	•6 mi	t?	0	0	0	
1796	"	sp.	Pta. Frailes,	B.	Sierr.	Mex.	"	+	1.7	t90;g10	0	0	0	
1799	"	sp.	La Burrera,	Sier.	"	Laguna,	B. C.,	Mex.	11/51	1	+	•4	h75;c20,m5	0

TABLE I. - CONT. - PAGE 5

CollectionSaponinins

Accession No.	Species	Source	Date collected	Hemolysis part	Plant test	Total, m.f.b., % of Total	Identified, % of Total	Flavo-nols	Alkaloids	Tannins	Sterols
A M A R Y L L I D A C E A E											
1815	Agave sp.	El Triunfo, Cape Dist., B.C., Mex.	11/51	+	0	0	0	0	0	0	+
1823	"	Sierra Laguna, B.C., Mex. 10 mi. W. of Danipole.	11/51	+	0	0	0	0	0	0	0
1824	"	B.C., Mex.	11/51	+	0	0	0	0	0	0	+
1869	"	Pta. Frailes, B.C., Mex. Road to Purissima, B.C., Mex.	11/51	+	0	0	0	0	0	0	+
1875	"	Comondú, B.C., Mex.	11/51	+	0	0	0	0	0	0	0
1883	Beschorneria pubescens	Hunt. Bot. Gard.	10/51	+	0	0	0	0	0	0	0
1713	Beschorneria yuccoides	"	10/51	fr	+	0	0	0	0	0	+
1742	Furcraea gigantea willmetiana	"	10/51	+	0	0	0	0	0	0	+
1739	" roezlii	"	10/51	+	0	0	0	0	0	0	+
1777	selloa	"	10/51	+	0	0	0	0	0	0	++
1011	Hymenocalis sonoriensis	Nay., Mex.	7/51	+	0	0	0	0	0	0	++
1277	" sp.	Alamos, Son., Mex. Hwy. to Compostela, Nay., Mex.	8/51	bu	+	0	0	0	0	0	+
1031	Lycoris squamigera	G. D. M.	8/51	fr	+	0	0	0	0	0	++
1908-0	Manfreda virginica	Merck and Co.	11/51	t	+	0	0	0	0	0	+
1909-0	" variegata	"	11/51	t	+	0	0	0	0	0	+
1910-0	"	"	"	"	"	0	0	0	0	0	0
1046	sp.	Nay., Mex.	8/51	w	+	45	c 100	0	0	0	+
1047	"	Guadalajara, Jal., Mex.	8/51	w	+	81	98; t or d11	0	0	0	+++
1548	?	San Cristobal de las Casas, Mex.	9/51	bu	+	1.64	961; t39	0	0	0	+++
A N A C A R D I A C E A E											
1168	Mangifera indica	C. G. F., Savannah, Ga.	8/51	fr	+	0	0	0	0	0	+
1407	Pistacia chinensis	Chico, Cal.	9/51	fr	-	0	0	0	0	0	0
1705	"	"	10/51	fr	+	0	0	0	0	0	++
1704	"	"	10/51	+	0	0	0	0	0	0	+
1183	"	"	8/51	-	0	0	0	0	0	0	+
1184	"	"	8/51	fr	+	0	0	0	0	0	++
1170	"	"	8/51	+	0	0	0	0	0	0	++
1701	"	"	10/51	fr	+	0	0	0	0	0	+
1700	"	"	10/51	+	0	0	0	0	0	0	++

TABLE I. - CONT. - PAGE 6

ANACARDIACEAE

1185	<i>Pistacia vera</i>	Chico, Cal.	8/51	fr +
1703	"	"	10/51	fr +
1702	"	"	10/51	fr +
1203	<i>Rhus copallina</i>	Highlands, N. C. Beltsville, Md.	8/51	1, s, fr +
1142	"	"	8/51	1 +
1143	"	"	8/51	s +
1144	"	"	8/51	r +
1145	"	"	8/51	r +
1529	<i>Integerrilla</i>	Ensenada, B. C., Mex.	8/51	r +
1379	" <i>typhina</i>	Raleigh, N. C.	9/51	fr +
1433	<i>Schinus terebin-</i> <i>thifolius</i>	Savannah, Ga.	9/51	1, s +
1839	"	C. G. F.	11/51	fr -
1665	<i>Spondias cytherea</i>	"	10/51	1, fr +
1432	<i>Annona muricata</i>	Savannah, Ga. (cult.)	9/51	1, s, fr -
1981	" <i>purpurea</i>	C. G. F.	11/51	1 -
1665	" <i>squamosa</i>	"	10/51	1, fr -
ANNONACEAE				
1945	<i>Acokanthera</i> <i>spectabilis</i>	C. G. F.	11/51	1, fr -
1387	<i>Apocynum</i>	"	1, fr -	-
"	<i>cannabinum</i>	Raleigh, N. C. Beltsville, Md.	9/51	fr -
1147	"	"	8/51	s -
1148	"	"	8/51	r -
1149	"	"	8/51	r -
1788	<i>Carissa bispinosa</i>	C. G. F.	10/51	1, fr +
1218	<i>grandiflora</i>	"	8/51	1, fr +
1972	<i>Cerbera thevetia</i>	"	11/51	1, fr -
1668	<i>Funtumia elastica</i>	"	10/51	1, fr -
1442	<i>Mascarenhasia elastica</i>	Savannah, Ga. (cult.)	9/51	1, s -
1671	<i>Strophanthus gratus</i>	C. G. F.	10/51	1 -
1927A	" <i>hispidus</i>	G. D. H.	11/51	r -
1927B	"	"	11/51	s -
1927C	"	"	11/51	r -
1670	<i>sarmenosus</i>	C. G. F.	10/51	1 +
1961	<i>Thevetia peruviana</i>	Colombia Tepic, Nayarit, Mex.	11/61	1, -
1283	sp.	"	8/51	fr -
APOCYMACEAE				

TABLE I. CONT. - PAGE 7

SapogeninsCollection

Accession No.	Species	Source	Date coll.-lect-ed	Plant part	Memo-rysis test	Total, Identified, m. f. b. d. s. of Total	Flavo-nols	Alka-loids	Tan-nins	Ster-ols
A Q U I F O L I A C E A E										
1447	Ilex cornuta	Chico, Ca.	9/51	fr	-	0	0	0	0	++
1446	" vomitoria	Savannah, Ga. (cult.)	9/51	1	-	0	0	0	+	++
1413	" sp.	G. D. M.	9/51	1	+	0	0	+	+	0
1682			10/51	1	+	0	0	+	+	0
1592	Arisaema triphyllum	Beltsville, Md. San Andres Tuxtla, Ver., Mex.	10/51	w, fr	-	0	0	0	0	0
1541	Colocasia sp.	G. D. M.	9/51	1	+	0	0	0	0	++
1254	" "	C. G. F.	8/51	1	-	0	0	0	0	++
1255	"	C. G. F.	8/51	s	+	0	0	0	0	++
1673	Monstera deliciosa	C. G. F.	10/51	1, fr	-	0	0	0	0	0
A R A C E A E										
1357	Aralia chinensis	G. D. M.	9/51	fl	+	0	0	0	0	++
1809	Hedera sp.	G. D. M.	10/51	1	+	0	0	0	0	+
1426	Schefflera actinophylla	Savannah, Ga.	9/51	1, s, fr	-	0	0	0	0	+
1049	Aristolochia sp.	24 mi. S. of Tepic, Mex.	8/51	r	-	0	0	0	0	+
A S C L E P I A D A C E A E										
1137	Asclepias syriaca	Beltsville, Md.	8/51	r	-	0	0	0	0	++
1138	" "	" "	8/51	s	+	0	0	0	0	++
1139	" "	" "	8/51	fr	+	0	0	0	0	++
1672	Cryptostegia madagascariensis	C. G. F.	10/51	1, fr	-	0	0	0	0	++
1687	Noya sp.	" "	10/51	1, fr	-	0	0	0	0	++
1645	Periploca graeca	G. D. M.	10/51	1	-	0	0	0	0	++
1676	sp.	C. G. F.	10/51	1, fr	+	0	0	0	0	++
B A L S A M I N A C E A E										
1078	Impatiens biflora	Beltsville, Md.	8/51	r, s	+	0	0	0	0	++
1080			8/51	1	+	0	0	0	0	++

TABLE I. CONT. - PAGE 8
BEGONIACEAE

		Alamos, Son., Mex.	8/51	W	*	0	
BERBERIDACEAE							
1452	Begonia sp.	Chico, Cal.	9/51	1, tw	+	0	++
1571	"	G. D. M.	9/51	1	+	0	++
1559	"	"	9/51	1	+	0	++
1558	"	"	9/51	1	+	0	++
1962	"	Silver Spring, Md.	11/51	1, S, fr	+	0	+
1319	"	G. D. M.	8/51	fr	+	0	+
			0	0	++	0	+
BETULACEAE							
1658A	Alnus japonica	"	10/51	1	+	0	++
1658B	"	"	10/51	fr	+	0	++
1661	Betula davurica	"	10/51	1	+	0	++
1552	Carpinus cordata	"	9/51	1	+	0	++
1680	Carpinus tschonoskii	"	10/51	1	+	0	++
			0	0	++	0	+
BIGNONIACEAE							
1978	Bignonia magnifica	C. G. F.	11/51	1, fl	+	0	++
1449	" unguis-cati	Chico, Cal.	9/51	1	-	0	++
1386	Campsis radicans	Raleigh, N. C.	9/51	1, fr	-	0	++
1491	Catalpa bignonioides	"	9/51	1	-	0	++
"	Catalpa hybrida	"	9/51	1	-	0	++
"	Japonica	Chico, Cal.	9/51	1	-	0	++
1492	"	"	9/51	fr	-	0	++
"	japonica	"	9/51	1	-	0	++
			0	0	++	0	+
BOMBACACEAE							
1689	Ceiba longissima	C. G. F.	10/51	1, fr	-	0	++
1607	Crescentia totuno	1 km. N. of Gigante, Colombia	10/51	Yw	-	0	++
1420	Jacaranda acutifolia	C. G. F.	9/51	1, fr	-	0	++
1854	Markhamia hildebrandtii	"	11/51	1, fr	-	0	++
1616	Rodermachera fenicis	"	10/51	1, fr	-	0	++
1894	Tecoma stans	Sierra Laguna, B. C., Mex.	11/51	1	+	0	++
			0	0	++	0	+
BURAGINACEAE							
1780	Celiba pentandra	C. G. F.	10/51	1, fr	-	0	++
1614	Chorisia insignis	"	10/51	1, fr	-	0	+
1690	" speciosa	"	10/51	1, fr	-	0	0
			0	0	++	0	+
BROMELIACEAE							
1423	Cordia alba	C. G. F.	9/51	1, fr	-	0	++
1858	" lutea	"	11/51	1, fl	+	0	++
1229	" myxa	"	8/51	1, S, fr	-	0	++
1424	" obliqua	"	9/51	1, fr	-	0	+
			0	0	++	0	+
CARYOPHYLLACEAE							
1225	Ananas sativus var.	C. G. F.	1	fr, s	-	0	++
	cayenne	"	8/51	1, fr, s	-	0	0
1892	Hectia sp.	Sierra Laguna, B. C., Mex.	11/51	1, fl	-	0	++
1278	Tillandsia sp.	Allamos, Son., Mex.	8/51	w	+	0	0
		"	8/51	1	-	0	0

TABLE I. CONT. - PAGE 9

CollectionSapogenins

Accession No.	Species	Source	Date collected	Plant part	Hemolysis test	Total no. b., % of Total	Flavonoids, % of Total	Alkaloids	Aflatoxins	Sterols
BURSERACEAE										
1098	<i>Bursera bipinnata</i>	Mazatan, May., Mex.	8/51	b of trunk	+	0	0	0	+	+
1093	" " <i>fagaroides</i>	" " "	8/51	b of trunk	+	0	0	0	0	0
1104	" " sp.	" " "	8/51	b of trunk	+	0	0	0	0	0
1601	" " "	La Bodega, Dept. Huila, Colombia, 1 Km. S. of Neiva, Dept. Huila, Colombia	10/51	yw	+	0	0	0	0	0
1609	" " "	" " "	10/51	yw	-	0	0	+	++	
BUXACEAE										
1451	<i>Buxus harlandii</i>	Chilco, Cal.	9/51	l	-	0	+++	+	++	
1572	" <i>Sempervirens</i>	G. D. M. Colonia Colonet, B.C.O. Mex.	9/51	l	-	0	0	0	++	
1530	<i>Simmondsia chinensis</i>	" "	9/51	fr	+	0	0	0	0	
1519	" "	" "	9/51	fr	-	0	0	0	0	
CACTACEAE										
1276	<i>Lophocereus schottii</i>	N. of Guaymas, Son., Mex.	8/51	s	-	0	+++	0	+	
1930	<i>Calycanthus floridus</i>	G. D. M.	11/51	l	+	0	0	++	++	
1915	<i>Meratia praecox</i> var. <i>grandiflora</i>	" "	11/51	l	-	0	0	++	0	
			11/51	l	-	0	0	++	0	
CALYCANTHACEAE										
1808	Canna sp.	" "	10/51	l	+	0	0	0	0	0
CAPPARIDACEAE										
1280	<i>Forchammeria watsonii</i>	N. Guaymas, Son., Mex.	8/51	l	-	0	0	0	0	+++
CAPRIFOLIACEAE										
1118	<i>Abelia grandiflora</i>	G. D. M.	8/51	l, fl	-	0	0	0	++	++
1457A	<i>Diervillia richessei</i>	" "	9/51	l	+	0	0	0	++	++
1457B	" <i>Dipelta floribunda</i>	" "	9/51	fr	+	0	0	0	++	++
1924	" <i>Lonicera japonica</i>	" "	11/51	l	-	0	0	0	++	++
1957	" <i>Siliver Spring, Md.</i>	" "	11/51	l, s	-	0	0	0	0	++
1256	d sp.	" "	8/51	l, fl	+	0	0	0	++	++
1257	" <i>Sambucus canadensis</i>	" "	8/51	fr	+	0	0	0	0	++
1417	" <i>Viburnum cassinoides</i>	Savannah, Ga. Highlands, N. C.	9/51	l, fr	-	0	0	0	0	++
1206	" "	" "	8/51	l, s, fr	-	0	0	0	0	++
1216	" "	" "	8/51	l, fr	-	0	0	0	0	+

TABLE I. CONT. - PAGE 10

		C A P R I F O L I A C E A E			
1458A	<i>Viburnum kansuense</i>	G. D. M.	9/51	1 ^r , "	0
1458B	"	"	9/51	r	0
1118	<i>macrocephalum</i>	"	8/51	r	0
1119	"	"	8/51	r	0
			8/51	t	0
		C A R Y O P H Y L L A C E A E			
1001	<i>Saponaria officinalis</i>	State College, E. Lansing, Mich.	7/51	w	0
1002	"	Beltsville, Md.	7/51	w	0
1993	sp.	G. D. M. 14/51	1, s	+	0
		C A S U A R I N A C E A E			
1494	<i>Casuarina glauca</i>	Chico, Calif.	9/51	1	0
1493	sp."	"	9/51	1	0
		C E L A S T R A C E A E			
1903	<i>Celastrus articulatus</i>	G. D. M.	11/51	1	0
1959	" scandens	Silver Spring, Md.	11/51	—	0
1361A	<i>Euonymus phellomania</i>	G. D. M.	9/51	r	0
1361B	"	"	9/51	—	0
1659	<i>Tripterygium wilfordii</i>	"	10/51	1	0
1311	"	sp.	8/51	1	0
1312	"	"	8/51	r	0
		C H E N O P O D I A C E A E			
1467	<i>Atriplex elegans</i>	Sacaton, Ariz.	9/51	1, s	0
1516	" <i>semibaccata</i>	Ensenada, B. C., Mex.	9/51	1	0
1401	<i>Chenopodium album</i>	Raleigh, N. C.	9/51	—	0
1484	" <i>botrys</i>	Murrieta, Cal.	9/51	s	0
		C I S T A C E A E			
1706	<i>cistus crispus</i>	Chico, Cal.	10/51	1	0
1708	" <i>monspeliensis</i>	"	10/51	1	0
		C L E T H R A C E A E			
1071	<i>Clethra alnifolia</i>	Beltsville, Md.	8/51	1	0
1079	"	"	8/51	r, rh	0
1082	"	"	8/51	s	0
1090	"	"	8/51	r	0
		C O C H L O S P E R M A C E A E			
1289	<i>Amoreuxia</i> sp.	San Bernardo, Son., Mex.	8/51	r	0
1281	"	Navojoa, Son., Mex.	8/51	r	0
1273	"	"	8/51	—	0

TABLE I. CONT. PAGE II

CollectionSapogenins

Accession No.	Species	Source	Date collected	Hemolysis test m. f. b.	Total m. f. b.	Identified, % total	Flavo- nols	Alka- loids	Tan- nins	Ster- ols
C O M B R E T A C E A E										
1612	<i>Terminalia arjuna</i>	C. G. F.	10/51	1, fr	-	0	0	++	+	+
1785	" <i>chebula</i>	" "	10/51	1, fr	+	0	0	++	++	++
1219	" <i>muelieri</i>	" "	8/51	1, s, fr	+	0	0	++	++	++
C O M M E L I N A C E A E										
1160	<i>Commelinia communis</i>	Beltsville, Md.	8/51	w, fr	-	0	0	0	++	
C O M P O S I T I A E										
1242	<i>Achillea millefolium</i>	Burtonsville, Md.	8/51	1, fr	+	0	0	0	++	
1243	" <i>sp.</i>	" "	8/51	s, fr	+	0	0	0	++	
1247	<i>Ambrosia trifida</i>	" "	8/51	fr	+	0	0	0	++	
1248	" <i>sp.</i>	" "	8/51	fr	+	0	0	0	++	
1249	" <i>sp.</i>	" "	8/51	s, fr	-	0	0	0	++	
1522	" <i>sp.</i>	Ensenada, B. C., Mex.	9/51	1	+	0	0	0	+	
1524	<i>Aplopappus venetus</i>	" "	9/51	1	+	0	0	0	0	
1520	<i>Artemisia californica</i>	" "	9/51	1	+	0	0	0	+	
1215	<i>Aster umbellatus</i>	Highlands, N. C.	8/51	1, s, fr	+	0	0	0	++	
1521	<i>Baccharis pilularis</i>	Ensenada, B. C., Mex.	9/51	1	+	0	0	0	0	
1921	<i>Centaurea</i> sp.	G. D. M.	11/51	1, fr	-	0	0	0	++	
1320	<i>Cirsium vulgare</i>	Chico, Cal.	9/51	fr	+	0	0	0	++	
1321	<i>Erechtites hieracifolia</i>	Raleigh, N. C.	9/51	1, fr	-	0	0	0	++	
1370	<i>Erechtites fistulosum</i>	Raleigh, N. C.	8/51	1, s, fr	-	0	0	0	++	
1208	<i>Eupatorium fistulosum</i>	Highlands, N. C.	8/51	w	-	0	0	0	++	
1073	" <i>perfoliatum</i>	Beltsville, Md.	8/51	fr	+	0	0	0	++	
1074	" <i>sp.</i>	" "	8/51	s	-	0	0	0	++	
1076	" <i>sp.</i>	" "	8/51	fr	-	0	0	0	++	
1089	" <i>sp.</i>	" "	8/51	fr	+	0	0	0	++	
1899	<i>Franseria ambrosioides</i>	Sierra Laguna, B. C., Mex.	11/51	yw	+	0	0	0	0	
1375	<i>Gnaphalium obusifolium</i>	Raleigh, N. C.	9/51	w	+	0	0	0	++	
1217	<i>Helianthus tomentosus</i>	Highlands, N. C.	8/51	1, s, fr	-	0	0	0	++	
1528	<i>Hymenocallis pentalepis</i>	Ensenada, B. C., Mex.	8/51	1	+	0	0	0	0	
1376	<i>Kuhnia eupatorioides</i>	Raleigh, N. C.	9/51	w	+	0	0	0	++	
1244	<i>Lactuca canadensis</i>	Burtonsville, Md.	8/51	w	-	0	0	0	0	
1374	<i>Prenanthes serpentina</i>	Raleigh, N. C.	9/51	1, fr	-	0	0	0	++	
1371	<i>Silphium compositum</i>	" "	9/51	1, fr	-	0	0	0	++	
1399	<i>Solidago</i> sp.	" "	9/51	1	+	0	0	0	++	

TABLE I. CONT. - PAGE 12

C O M P O S I T E							
1065	<i>Tagetes</i> sp.	G. D. M.	8/51	r	-	0	+
1066	"	"	8/51	1	+	0	0
1112	"	"	8/51	r	-	0	+++
1414	<i>Trilisa odoratissima</i>	Savannah, Ga.	9/51	r, s, r	-	0	++
1893	<i>Viguiera tomentosa</i>	Sierra Laguna, B.C., Mex.	11/51	r	-	0	+
						0	0
						0	0
C O N V O L V U L A C E A E							
1596	<i>Cuscuta</i> sp.	Beltsville, Md.	10/51	w, fr	+	++	0
1338	<i>Ipomoea arborescens</i>	Alamos, Son., Mex.	8/51	b	-	0	++
1332	"	"	8/51	1	+	0	+++
1415	"	<i>Savannah, Ga.</i>	9/51	t, r	-	0	+++
1162	"	Beltsville, Md.	8/51	r	+	0	0
						0	0
C O R N A C E A E							
1929	<i>Aucuba</i> sp.	G. D. M.	11/51	1	-	0	0
1660A	<i>Cornus walteri</i>	"	10/51	1	-	+	0
1660B	"	"	10/51	fr	-	0	+
C U C U R B I T A C E A E							
1286	<i>Apodanthera</i> sp.	Cd. Obregon, Son., Mex.	8/51	r	+	0	0
1336	"	"	8/51	1	-	0	++
1482	<i>Cucurbita foetidissima</i>	Murrieta, Cat.	9/51	1	+	0	0
1889	<i>Maximowiczia</i> sp.	Colonia Callies, B.C., Mex.	11/51	r	-	0	++
1339	<i>Melothria charantia</i>	Rio Piaxtla, Sin., Mex.	9/51	1	+	0	+++
C U N O N I A C E A E							
1602	<i>Weinmannia</i> sp.	20 km. S. of San Agustin, Colombia	10/51	w	-	0	+
C Y P E R A C E A E							
1591	<i>Cyperus strigosus</i>	Beltsville, Md.	10/51	w, fr	-	0	+
C Y R I L L A C E A E							
1113	<i>cyrilla racemiflora</i>	G. D. M.	8/51	fr	+	0	+++
1114	"	"	8/51	1	+	0	++
D I L L E N I A C E A E							
1806A	<i>Actinidia chinensis</i>	"	10/51	fr	+	0	0
1806B	"	"	10/51	1	+	+	++
1068	"	Chico, Cat.	8/51	1	-	0	+++
1179	"	"	8/51	w	+	0	0
1180	"	"	8/51	1	+	0	+

TABLE I. CONT., - PAGE 13

Collection

Collection	Accession No.	Species	Source	DIOSCOREACEAE					Date sol-lect-ed	Plant part	Hemo-lysis test	Total m. f. b. v.	Identif. % of tot
15322	"	<i>Dioscorea bartlettii</i>	Tabasco, Mex. "	9/51	rh	+	0.1	d 50; ss 50			0		
1533	"	<i>composita</i>	San Andres Tuxtla, Ver., Mex.	9/51	t	-	0						
1540	"			9/51	t	+	3.8	d 100			0		
1348	"	<i>dodecaneura dumetorum</i>	Rio de Janeiro, Brazil Kenya Colony (Merck and Co.)	9/51	1, s	-	0						
1911-0				11/51	t	-	0						
1347	"	<i>glandulosa</i>	Rio de Janeiro, Brazil	9/51	t	-	0						
1991	"	<i>glaucha</i>	G. D. M.	11/51	r	+	0.2	mi	d				
1346	"	<i>grisebachii</i>	Rio de Janeiro, Brazil	9/51	rh	-	0						
1345	"	<i>taxiflora</i>	" "	9/51	rh	+	0						
1369A	"	<i>macrostachya</i>	G. D. M.	9/51	1, s	+	0						
1369B	"	"	" "	9/51	r	-	0						
1369C	"	"	" "	9/51	t	+	0						
1662	"	"	" "	10/51	1, s, r	-	0						
1905-0	"	<i>minutiflora</i>	Merck and Co.	11/51	t	+	0						
1907-0				11/51	t	-	0						
1343	"	<i>monadelpha</i>	Rio de Janeiro, Brazil	9/51	t	-	0						
1664	"	<i>multiflora</i>	G. D. M.	10/51	r, s, l	-	0						
1903-0	"	<i>praehensilis</i>	Merck and Co.	11/51	t	+	0						
1913-0	"	<i>sansibarensis</i>	" "	11/51	t	-	0						
1342	"	<i>sinuata</i>	Rio de Janeiro, Brazil	9/51	t	-	0						
1329	"	<i>villosa</i>	Highlands, N. C. Beltsville, Md.	9/51	r	+	0.5	mi	d				
1960	"	"	Silver Spring, Md.	11/51	r	+	1.2	mi	d				
1971	"	"	G. D. M.	11/51	r	+	0.6	mi	d				
1990	"	"	Beltsville, Md.	11/51	r	+	0						
1075	"	"	" "	8/51	rr	-	0						
1083	"	"	" "	8/51	1, s	+	0.5	mi	d				
1086	"	"	" "	8/51	rh	+	1.0	mi	d				
1344	"	sp.	Rio de Janeiro, Brazil	9/51	1, t	+	0						
1650	"	"	G. D. M.	10/51	1, t	+	0						
1649	"	"	" "	10/51	1, t	+	0						
1561	"	"	" "	9/51	1, s	-	0						
1556	"	"	" "	9/51	1, s	-	0						
1555	"	"	" "	9/51	1, s	-	0						
1635	"	"	" "	10/51	t	-	0						
1634	"	"	" "	10/51	s	-	0						
1633	"	Okinawa	" "	10/51	rh	-	0						
1657	"	G. D. M.	" "	10/51	s, t	-	0						
1655	"	"	" "	10/51	1, t	-	0						
1654	"	"	" "	10/51	1, t	-	0						

TABLE I. CONT. - PAGE 14

DIOSCOREACEAE

	G. o.	D. o.	M. o.	10/51	11/t	+	0
1653	Dioscorea sp.			10/51	11/t	+	0
1652				10/51	11/t	+	0
1651				10/51	11/t	-	0
1646				10/51	t/s	-	0
1648				10/51	11/t	-	0
1647				10/51	11/t	-	0
1663				10/51	11/r/s	-	0
1679				10/51	11/r/s	-	0
1678				10/51	11/s,r	+	+
1677				10/51	11/r/s	+	+
1805				10/51	11/s,r	-	0
1992				11/51	11,s,t	-	0
1994				11/51	r,t	+	+
1995				11/51	11/s,t	-	0
1996				11/51	11/s,t	-	0
1997				11/51	11/s,t	+	+
1998				11/51	11/s,t	-	0
1999				11/51	11/s,t	+	+
2000				11/51	11/s,t	-	0
1105	Autlan, Jal., Mex.			8/51	t	-	0
1102				8/51	t	-	0
1050	Nay., Mex.			8/51	t	-	0
1037				7/51	t	-	0
1032				7/51	t	-	0
1021				7/51	t	-	0
1035				7/51	t	-	0
1036				7/51	t	-	0
1058	G. D. M.			8/51	t	-	0
1059				8/51	1.s	-	0
1187				8/51	1.s	-	0
1188				8/51	1.s	-	0
1189				8/51	1.s	-	0
1190				8/51	1.s	-	0
1191				8/51	1.s	-	0
1192				8/51	1.s	-	0
1193				8/51	1.s	-	0
1194				8/51	1.s	-	0
1195				8/51	1.s	-	0
1196				8/51	1.s	-	0
1197				8/51	1.s	-	0
1198	Tuxtla Gutierrez, Chia., Mex.			8/51	1.s	+	0
1534	Son., Mex.			9/51	t	-	0
1018	Nay., Mex.			7/51	t	-	0
1017				7/51	t	-	0
1013				7/51	t	-	0
1012				7/51	t	-	0

d

m¹

t

+

+

+

+

d 100

TABLE I. CONT. - PAGE 15

CollectionSapogenins

Accession No.	Species	Source	Date coll.-lect-ed	Plant part	Hemo-lysis test	Total no. f.b.s.	Identified, % of total	Flavo-noids	Alka-loids	Tan-nins	Ster-ols
DIOSCOREACEAE											
Dioscorea sp.											
1107		Autlan, Jal., Mex.	8/51	t	+	2.0	d 100	0	0	0	0
1535	"	Chilpancingo, Guer., Mex.	9/51	t	-	0	0	0	0	0	0
1536	"	Cacahuamilpa, Morel., Mex.	9/51	t	-	0	+	0	0	0	0
1543	"	San Andres Tuxtla, Ver., Mex.	9/51	t	-	0	0	0	0	0	0
1544	"	Tierra Blanca, Ver., Mex.	9/51	t	-	0	+	0	0	0	0
1549	"	Morel. and Chia, Mex.	9/51	t	+	0.3 ml	0	0	0	0	0
1906-0	"	Merck and Co.	11/51	t	-	0	0	0	0	0	0
1912-0	"	"	11/51	t	-	0	0	0	0	0	0
EUBENACEAE											
1223	Diospyros ebenaster kaki	C. G. F. Chico, Cal.	8/51	1, fr	-	0	0	+	++	++	++
1939	"	"	11/51	1	-	0	+	0	+	+	++
1940	"	"	11/51	fr	-	0	0	0	+	0	+
1850	"	"	11/51	fr	-	0	0	0	+	0	+
1851	"	"	11/51	fr	-	0	0	0	0	0	+
1973	"	"	11/51	1, fr	-	0	0	0	0	0	0
1224	maritima	C. G. F.	10/51	1, fr	-	0	0	0	0	0	0
1373	montana	"	8/51	1, fr, s	+	0	0	0	0	0	0
1294	virginiana	Raleigh, N. C.	9/51	1, fr	-	0	0	0	0	0	0
	sp.	C. G. F.	8/51	1, fr	-	0	0	0	0	0	0
ELAEAGNACEAE											
1641	Elaeagnus glabra	G. D. M.	10/51	1, fr	-	0	0	0	0	0	0
1313	sp.	"	8/51	1	-	0	0	0	0	0	0
1314	"	"	9/51	fr	+	0	0	0	0	0	0
1557	Hippophae rhamnoides	"	9/51	1	-	0	0	0	0	0	0
ERICACEAE											
1340	Arbutus andrachne	Chico, Cal.	9/51	1	-	0	0	0	0	0	0
1324	"	"	9/51	fr	-	0	0	0	0	0	0
1985	Enkianthus campanulata	G. D. M.	11/51	+	0	0	0	0	0	0	0
1934A	Kalmia latifolia	"	11/51	fr	+	0	0	0	0	0	0
1934B	"	"	11/51	1	+	0	0	0	0	0	0
1212	"	Highlands, N. C.	8/51	1, fr	-	0	0	0	0	0	0
1986	Leucothoe sp.	G. D. M.	11/51	+	0	0	0	0	0	0	0
1372	Oxydendrum arboreum	Raleigh, N. C.	9/51	1	+	0	0	0	0	0	0
1213	Rhododendron maximum	Highlands, N. C.	8/51	1, fr	-	0	0	0	0	0	0
1567	Eucommia ulmoides	G. D. M.	9/51	1	-	0	0	0	0	0	0

TABLE I. CONT. - PAGE 16

EUPHORBIACEAE									
1412	<i>Aleurites fordii</i>	Savannah, Ga.	9/51	fr	-	0			
1261	"	Chico, Cal.	8/51	1	+	0			
1226	" moluccana	C. G. F.	8/51	1, fr	-	0			
1176	<i>Antidesma bunius</i>	" "	8/51	1, fr	-	0			
1285	<i>Cnidoscolus</i> sp.	Alamos, Son., Mex.	8/51	r	+	0			
1539	<i>Cnidoscolus</i> sp.	San Andres Tuxtla, Ver., Mex.	9/51	r	-	0			
1538	"	Alvarado, Ver., Mex.	9/51	r	+	0			
1547	"	"	9/51	r	-	0			
1546	"	Villa Union, Sin., Mex.	9/51	r	+	0			
1290	"	Compostela, Nay., Mex.	8/51	r	-	0			
1103	"	Jal., Mex.	8/51	r	-	0			
1051	<i>Euphorbia corollata</i>	Beltsville, Md.	8/51	r	-	0			
1130	"	"	8/51	w	+	0			
1131	"	"	8/51	w	+	0			
1132	"	"	8/51	w	+	0			
1201	<i>Garcia nutans</i>	Highlands, N. C.	8/51	fl, fr	+	0			
1860	<i>Jatropha cinerea</i>	C. G. F.	11/51	1, fl	-	0			
1891	<i>Jatropha cordata</i>	San Ignacio, B.C., Mex.	11/51	tw	-	0			
1333	"	Alamos, Son., Mex.	8/51	1	-	0			
1436	" hastata	Savannah, Ga. (cult.)	9/51	1, fl, fr	-	0			
1019	" sp.	Nay., Mex.	7/51	r	+	0			
1859	<i>Mallotus philippensis</i>	C. G. F.	11/51	1	+	0			
1048	<i>Manihot angustifolia</i>	Jal., Mex.	8/51	r	-	0			
1279	" isoloba	Alamos, Son., Mex.	8/51	r	-	0			
1890	" sp.	Comondu, B. C., Mex.	11/51	r	-	0			
1605	<i>Phyllanthus "barbasco"</i>	Cundinamarca, Colombia	10/51	yw	+	0			
1410	<i>Sapium seiferum</i>	Savannah, Ga. (cult.)	9/51	1, fr	-	0			
1837	<i>Savia sessiliflora</i>	C. G. F.	11/51	1, fr	-	0			
FAGACEAE									
1942	<i>Castanea mollissima</i>	Chico, Cal.	11/51	1	+	0			
1910	<i>Fagus sylvatica</i>	G. D. M.	11/51	1	-	0			
1406	<i>Lithocarpus glabra</i>	Savannah, Ga. (cult.)	9/51	1, fl	-	0			
1563	<i>Quercus acutissima</i>	G. D. M.	9/51	1, tw	-	0			
1564	"	"	9/51	fr	-	0			
FLACOURTIACEAE									
1301	<i>Flacourinia indica</i>	C. G. F.	8/51	1, s, fr	+	0			
1786	" rukam	" "	10/51	1, fl	+	0			
1974	<i>Oncoba spinosa</i>	" "	11/51	1, fr	-	0			
FOUQUIERIACEAE									
1877	<i>Fouquieria burragei</i>	Bahia Concepcion, B. C., Mex.	11/51	b	+	0			
1878	" "	Bahia Concepcion, B. C., Mex.	11/51	tw	+	0			

TABLE I. - CONT. - PAGE 17

Accession No.	Species	Source	Collection				Sapogenins			
			Date col- lect- ed	Plant part	Hemo- lytic test	Total m.f.b.o. %	Identified, % of total	Flavo- nois	Alka- loids	Tan- inins
FOUQUIERIACEAE										
1271	<i>Fouquieria macdougalii</i>	San Bernardo, Son., Mex.	8/51	b	+	0.6 mi	0	0	0	+
1876	" <i>peninsularis</i>	Bahia Concepcion, B.C., Mex.	11/51	b	+		+	0	0	+
1886	" " "	Riviera, Cape Dist., B.C., Mex.	11/51	b	+	0	+	0	0	+
1879	" " "	Rancho Mesquital, B.C., Mex.	11/51	t _w	+	0	+	0	0	+
1873	" " "	San Ignacio, B.C., Mex.	11/51	b	+	0	+	0	0	++
1525	" <i>splendens</i>	San Fernando, B.C., Mex.	9/51	s	+	0	+	0	0	0
1518	" <i>Idria columnaris</i>	" " "	9/51	wd	+	0	+	0	0	+
1514	" "	" " "	9/51	b	+	0.5	d	0	0	++
1517	" "	" " "	n				+	0	0	++
FRANKENIACEAE										
1888	<i>Frankenia palmeri</i>	Rancho Mesquital, B.C., Mex.	11/51	l, tw	-	0	+	0	0	++
GRAMINEAE										
1443	<i>Arundo donax</i>	Chico, Cal.	9/51	l	-	0	0	+++	0	+++
1807	" <i>plinii</i>	" " "	10/51	l	-	0	+	0	0	++
1322	" " "	" " "	9/51	fr	-	0	0	0	0	+++
1323	" " "	" " "	9/51	fr	+	0	0	0	0	+++
1450	<i>Bambusa multiplex</i>	" " "	9/51	l	-	0	0	0	0	+++
1411	<i>Eremochloa ophiuroides</i>	Savannah, Ga. (cult.)	9/51	l, fl	-	0	++	0	0	++
1448	<i>Phyllostachys bambusoides</i>	Chico, Cal.	9/51	l	-	0	++	0	0	+++
HAMAMELIACEAE										
1932	<i>Fortunearia sinensis</i>	G. D. Mo.	11/51	l	+	0	+	0	++	0
1925	<i>Hamamelis vernalis</i>	" sp.	11/51	l	+	0	++	0	++	+
1568A	" " "	" " "	9/51	fr	-	0	0	0	++	+
1568B	" " "	" " "	9/51	l	-	0	+	0	++	+
1638	<i>Loropetalum chinense</i>	" " "	10/51	l	-	0	++	0	++	+
1912	<i>Parrotia persica</i>	" " "	11/51	l	+	0	+	0	++	+
HYDROPHYLLACEAE										
1471	<i>Eriodictyon crassifolium</i>	Murrieta, Cal.	9/51	l	+	0	+	0	0	+
1526	" sp.	Ensenada, B.C., Mex.	9/51	l	+	0	+	0	0	+

TABLE I. (CONT.) - PAGE 18

		HYPERICACEAE		
	G. D. M.	11/51	1	+
1585	<i>Garcinia spicata</i>	C. G. F. Savannah, Ga. Beltsville, Md.	9/51 1, fr 9/51 1, fr 9/51 1, fr+	0 0 0
1430	<i>Hypericum patulum</i>			++ ++ ++
1349				++ ++ ++
		IRIDACEAE		
	G. D. M.	11/51	1	+
1922	<i>Gladiolus</i> sp.			+
		JUGLANDACEAE		
	G. D. M.	9/51	yw	+
1341	<i>Carya illinoensis</i>	Chico, Cal. G. D. M. Murrieta, Cal.	10/51 1, fr 9/51 1, fr 9/51 1, fr	0 0 0 0 0
1685	<i>Juglans californica</i>	Murrieta, Cal. (cult.)	8/51 1, fr	0 0
1469				++ ++
1474	<i>Pterocarya stenoptera</i>	Savannah, Ga.	9/51 1, fr	0 0
		LABIATAE		
	G. D. M.	8/51	w	+
1230	<i>Lycopus virginicus</i>	Burtonsville, Md.	8/51 1, fr	0 0
1250	<i>Perilla frutescens</i>	"	8/51 1, fr	0 0
1251		"	8/51 1, fr	0 0
1241	<i>Prunella vulgaris</i>	"	8/51 1, fr	0 0
1473	<i>Salvia mellifera</i>	Murrieta, Cal. (cult.)	9/51 1, fr	0 0
1901	<i>Salvia</i> sp.	Sierra Laguna, B.C., Mex.	11/51 1, fr	0 0
1378	<i>Trichostema dichotoma</i>	Raleigh, N. C.	9/51 1, fr	0 0
		LAURACEAE		
	G. D. M.	11/51	fr	+
1969	<i>Lindera benzoin</i>	Silver Spring, Md.	11/51 1, fr	0 0
1967		C. G. F. G. D. M. Beltsville, Md.	8/51 1, fr, s 9/51 1, fr	0 0 0
1228	<i>Persea americana</i>	"	8/51 1, fr	0 0
1459	<i>Sassafras albidum</i>	"	8/51 1, fr	0 0
1133		"	8/51 1, fr	0 0
1134		"	8/51 1, fr	0 0
1135		"	8/51 1, fr	0 0
		LEGUMINOSAE		
	G. D. M.	8/51	1	-
1125	<i>Acacia albida</i>	Chico, Cal.	8/51 1, fr	0 0
1124	<i>bailleiana</i>	"	8/51 1, fr	0 0
1669	<i>catechu</i>	C. G. F.	10/51 1, fr	0 0
1122	<i>decurrrens</i>			++ ++
1123	<i>var. dealbata</i>	Chico, Cal.	8/51 1, fr	0 0
	<i>Acacia melanoxylon</i>			++ ++
1121	<i>pycnantha</i>	"	8/51 1, fr	0 0
1177	<i>sowdenii</i>	"	8/51 1, fr	0 0
1303	<i>spadicigera</i>	C. G. F. Chico, Cal.	8/51 1, fr	0 0
1178	<i>Stricta</i>	C. G. F.	8/51 1, fr	0 0
1946	<i>Adenanthera pavonina</i>		11/51 1, fr	0 0
1263	<i>Adenocarpus foliosus</i>	Chico, Cal.	8/51 1, fr	0 0
1258	<i>Albizia julibrissin</i>	"	8/51 1, fr	0 0
1259			8/51 1, fr	0 0
1260	<i>kalkora</i>		8/51 1, fr	0 0

TABLE I. CONT. - PAGE 19

CollectionSapogenins

Accession No.	Species	Source	Date collected	Plant part	Hemolysis test	Total m.o.f.b., %	Identified, % of total	Flavonoids	Tannins	Alkaloids	Sterols
LEGUMINOSAE											
1403	<i>Albizia kalkora</i>	Savannah, Ga. C. G. F.	9/51	1° fr	-	0	+ +	0	0	+ +	+++
1441	" <i>lebbekoides</i>		9/51	1° S	-	0	-	0	0	+ +	+++
1897	" <i>occidentalis</i>	Sierra Laguna, B.C., Mex.	11/51	+	0	0	-	0	0	+ +	+
1611	" <i>odoratissima</i>	C. G. F.	10/51	+	0	0	-	0	0	+ +	+
1157	<i>Apios americana</i>	Beltsville, Md.	8/51	r	-	0	-	0	0	0	0
1158	"	"	"	"	"	"	"	0	0	0	+++
1597	<i>Bauhinia galpinii</i>	C. G. F.	8/51	1° S	-	0	-	0	0	0	0
1582	" <i>hookeri</i>		10/51	w, fr	+	0	-	0	0	+	+
1864	" <i>purpurea</i>		9/51	1° fr	-	0	-	0	0	++	++
1947	"		11/51	1° fr	-	0	-	0	0	0	0
1613	" <i>tomentosa</i>	"	10/51	1° fr, fr	-	0	-	0	0	0	++
1418	<i>Butea capitata</i>	Savannah, Ga. C. G. F.	9/51	1° fr, fr	+	0	-	0	0	0	++
1983	<i>Caesalpinia ferrea</i>	C. G. F.	11/51	1° fr	-	0	-	0	0	0	++
1622	" <i>pulcherrima</i>		10/51	1° fr	-	0	-	0	0	0	++
1835	" <i>hookerii</i>		11/51	1° fr, fr	+	0	-	0	0	0	++
1583	<i>Calliandra haematocephala</i>	"	9/51	1° fr	-	0	-	0	0	0	++
1621	" <i>surinamensis</i>	"	10/51	1° fr, fr	-	0	-	0	0	0	++
1920	<i>Caragana microphylla</i>	G. D. M.	11/51	1° fr	-	0	-	0	0	0	++
1949	<i>Cassia alata</i>	C. G. F.	11/51	1° fr	-	0	-	0	0	0	++
1948	" <i>brasiliensis</i>		11/51	1° fr	-	0	-	0	0	0	++
1334	" <i>emarginata</i>	Alamos, Son., Mex. C. G. F.	8/51	1°	-	0	-	0	0	0	+++
1297	" <i>excelsa</i>		8/51	1°	-	0	-	0	0	0	+++
1159	" <i>fasciculata</i>	Beltsville, Md. G. D. M.	8/51	w, fr	-	0	-	0	0	0	+++
1305	" <i>fistulosa</i>		8/51	1° fr	+	0	-	0	0	0	++
1295	" <i>marginata</i>	C. G. F.	8/51	1° S	+	0	-	0	0	0	++
1388	" <i>nigritans</i>	Raleigh, N. C. C. G. F.	9/51	w, fr	-	0	-	0	0	0	+++
1574	" <i>renigera</i>		9/51	1° fr	-	0	-	0	0	0	+++
1330	" <i>uniflora</i>	Rio Neiva, Juntas, W. of Algeciras, Colombia	8/51	1° fr	-	0	-	0	0	0	++
1600	" <i>sp.</i>	C. G. F.	10/51	w, fr	+	0	-	0	0	0	++
1170	<i>Ceratonia siliqua</i>		8/51	fr	+	0	-	0	0	0	++
1984	"		"	"	"	"	"	0	0	0	++
1838	<i>Cercis canadensis</i>	Raleigh, N. C. Chico, Cal.	11/51	fr (fem.)	+	0	-	0	0	0	++
1377	" <i>siliquastrum</i>	G. D. M.	9/51	1°	-	0	-	0	0	0	++
1710	<i>Cladrastis amurensis</i>		10/51	1°	-	0	-	0	0	0	++
1566	"		9/51	1°	-	0	-	0	0	0	++
1943	<i>Colvillea racemosa</i>	C. G. F.	11/51	1° fr	+	0	-	0	0	0	++
1913	<i>Cytisus supinus</i>	G. D. M.	11/51	1°	-	0	-	0	0	0	++
1829	<i>Enterolobium timbouva</i>	C. G. F.	11/51	1° fr	+	0	-	0	0	0	++
1400	<i>Gleditsia triacanthos</i>	Raleigh, N. C.	9/51	fr	-	0	-	0	0	0	+

TABLE I. CONT. - PAGE 20
 LEGUMINOSAE

		Neiva, N. & M. of Rio Magdalena, Colombia		
1610	<i>Gliricidia sepium</i>	G. D. M.	10/51	yw
1681	<i>Gymnocladus chinensis</i>	C. G. F.	10/51	+
1617	<i>Haematoxylon campechianum</i>	G. D. M.	10/51	0
1637	<i>Indigofera chinense incarnata</i>	G. D. M.	10/51	+
1963	<i>Inga</i> sp.	G. D. M.	11/51	+
1907	<i>Lathyrus latifolius</i>	G. D. M.	11/61	+
1787	<i>Mimosa bahamensis</i>	C. G. F.	10/61	1, fl, fr
1575	<i>Mundulea suberosa</i>	"	9/51	1, fr
1483	<i>Oineya tessota</i>	Sacaton, Ariz.	9/51	-
1836	<i>Peltogyne nitens</i>	C. G. F.	11/51	1, fr
1431	<i>Peltophorum africanum</i>	"	9/51	1, fr
1834	<i>Pithecellobium brasiliense</i>	"	11/51	1, fl, fr
1674	<i>Pinierme</i>	"	10/51	1, fr
1926	<i>Petteria ramentacea</i>	G. D. M.	11/51	-
1675	<i>Piptadenia macrocarpa</i>	C. G. F.	10/51	1, fr
1335	<i>Piscidia mollis</i>	Alamos, Son., Mex.	8/51	0
1300	<i>Pithecellobium brevifolium</i>	C. G. F.	8/51	1, fr
1619	<i>Flexicaulus undulatum</i>	G. D. M.	10/51	+
1898	"	C. G. F.	11/51	+
1580	<i>Pongamia pinnata</i>	G. D. M.	9/51	1, fr
1579	<i>Saraca cauliflora</i>	"	9/51	1, fr
1306	<i>Schotia transvaalensis</i>	"	8/51	1, fr
1169	<i>Tamarindus indica</i>	"	8/51	rh
1565A	<i>Vigna sinensis</i>	G. D. M.	9/51	fr
1565B	"	G. D. M.	9/51	1
1116	<i>Wisteria floribunda</i>	"	8/51	fr
1117	"	"	8/51	1
LILIACEAE				
1718	<i>Aloe arborescens</i>	Hunt. Bot. Gard. Yuc., Mex.	10/51	1
1792	<i>A. barbadensis</i>	Hunt. Bot. Gard. Yuc., Mex.	11/51	juice
1727	<i>A. brevifolia</i>	Hunt. Bot. Gard. Yuc., Mex.	10/51	fl
1716	<i>A. ferox</i>	Hunt. Bot. Gard. Yuc., Mex.	10/51	-
1726	<i>A. mariothii</i>	Hunt. Bot. Gard. Yuc., Mex.	10/51	-
1729	<i>A. mitrifolia</i>	"	10/51	fl
1722	<i>A. salm-dyckiana</i>	"	10/51	1
1732	"	Tecolotlan, Jal., Mex.	10/51	1
1099	<i>Anthericum?</i>	G. D. M.	8/51	w, fl
1916	<i>Asparagus dauricus</i>	G. D. M.	11/51	-
1161	<i>Astelia officinalis</i>	Beltzville, Md.	8/51	1, s
1802	<i>Astelia neo-caledonica</i>	Montagne des Sources, Caledonia	10/51	1, s
1801	<i>Cordyline</i>	Caledonia	10/51	1, s

0.6 ml ss

TABLE I. CONT. - PAGE 21

Collection

Access- ion No.	Species	Source	Saponineins					Flavo- noids	Alka- loids	Tann- ins	Ster- ols
			Date col- lect- ed	Hemo- lytic test	Total m.o.f.b. %	Identified, % of total					
<u>L I L I A C E A E</u>											
1299	<i>Cordyline terminalis</i>	C. G. F. Hunt. Bot. Gard.	8/51	1° fr	+	0	0	0	0	0	+
1735	<i>Dasyliion</i> sp.	G. D. M. Beltsville, Md.	10/51	1°	-	0	0	0	0	0	++
1367	<i>Gasteria</i> sp.	Franklin, N. C.	9/51	+	0	0	0	0	0	0	+
1588	<i>Lilium canadense</i>		10/51	W. fr	0	0	0	0	0	0	++
1041	" <i>superbum</i>		8/51	1° S	-	0	0	0	0	0	++
1902	" <i>sp.</i>	Crescent City, Cal. (cult.)	11/51	bu	-	0	0	0	0	0	0
1060	<i>Liriopé graminifolia</i>	G. D. M. Villa Corona, Jal., Mex.	8/51	1° f1	+	0	0	0	0	0	++
1095	<i>Milia biflora</i>	Sierra Laguna, B. C., Mex.	8/51	bu	+	+	+	0	0	0	++
1870	<i>Molinia beldingii</i>	Dur., Mex.	7/51	1°	+	0	0	0	0	0	+
1014	" <i>longifolia</i>		7/51	1°	+	0	0	0	0	0	+
1768	" " <i>Polyanthes</i> ?	Hunt. Bot. Gard. Autlan, Jal., Mex.	10/51	1°	-	0	0	0	0	0	++
1094	<i>Smilax glauca</i>	Beltsville, Md.	8/51	bu	+	0	3 mi	0	0	0	++
1593	" <i>herbacea</i>	"	10/51	W. fr	0	0	++	0	0	0	++
1030	" <i>cf. mexicana</i>	17 mi. along rd. to	10/51	W. fr	-	0	0	0	0	0	+
1804	" <i>sp.</i>	Jalisco Tan, Mex.	7/51	rh	+	0	0	0	0	0	++
		Montagne des Sources, New Caledonia	10/51	1° S	+	0	0	0	0	0	+
		Caledonia									
1328	<i>Stenantherium gramineum</i>	Highlands, N. C. Torrey Pines, Cal. (cult.)	9/51	1°	+	0	0	0	0	0	++
1472	<i>Urginea maritima</i>	Franklin, N. C.	9/51	1°	+	0	0	0	0	0	0
1042	<i>Veratrum viride</i>	Montagne des Sources, New Caledonia	8/51	1°	-	0	0	0	0	0	++
1803	<i>Xeronema moorei</i>		10/51	W	-	0	+	0	0	0	+
1052	<i>Xerophyllum asphodeloides</i>	Highlands, N. C.	8/51	w	+	0.3 mi	0	0	0	0	++
1025	<i>Yucca angustissima</i>	Near Mt. Carmel, Utah	7/51	1°	+	0.25	SS90;C10	0	0	0	++
1004	" <i>arizonica</i>	Nogales, Ariz.	7/51	1° S	+	0.25	SS100	0	0	0	+
1070	" <i>australis</i>	Hunt. Bot. Gard.	10/51	1°	0	0	0	0	0	0	++
1023	" <i>baccata</i>	20 mi. N. of Kanab, Utah	7/51	1°	+	0.45	SS100	0	0	0	+
1024	" <i>"</i>	"	7/51	1°	+	0	0	0	0	0	+
1007	" <i>elata</i>	46 mi. from Nogales, Ariz., New Mex.	7/51	1° S	+	0.45	SS100	0	0	0	+
1008	" <i>"</i>	8 mi. S. of Lordsburg, New Mex.	7/51	1°	+	1.3 mi	SS	0	0	0	0
1678-0	" <i>taxoniana</i>	Merck and Co.	10/51	1°	+	0.48	t60:ss40	0	0	0	++
1679-0	" <i>pallida</i>	Merck and Co.	10/51	1°	+	0	0	0	0	0	0
1503	" <i>peninsularis</i>	Rosario, B. C., Mex.	9/51	1°	+	0.35	t99:gtr	0	0	0	0
1507	" "	San Fernando, B. C., Mex.	9/51	1°	+	1.1	t89:h11	0	0	0	+
1509	" "	Merck and Co.	9/51	1°	+	0.95	t70:g30	0	0	0	+
1677-0	" <i>reverchonii</i>	San Fernando, B. C., Mex.	10/51	1°	+	0	0	0	0	0	+
1506	" <i>schildigera</i>	Kingman, Ariz.	10/51	1°	+	2.9	SS100	0	0	0	0
1779-0	" <i>"</i>		10/51	1°	+	0	0	0	0	0	0
1686-0	" "						SS80:mk20	1.0	0	0	0

TABLE I. CONT - PAGE 22

		LILIACEAE			
1734	<i>Yucca valida</i>	Hunt. Bot. Gárd.	10/51	1	+ 0.2 mi
1725	" <i>whipplei</i>	"	10/51	1	0
1462	" "	Murrieta, Cal.	9/51	1	0, 4
1461	" "	"	9/51	1	0, 7
1044	sp.	Gallup, New Mex.	8/51	1	0, 75
1866	" "	Sierra Laguna, B. C., Mex.	11/51	1	0.4 mi
1255-0	" "	Kingman, Ariz.	9/51	1	1.0
1276	" "	San Bernardo, Son., Mex.	8/51	r	SS85; unk. 15 SM100
		LOBELIACEAE			
1231	<i>Lobelia inflata</i>	Burtonsville, Md.	8/51	w	0
				+	0
		LOGANIACEAE			
1063	<i>Buddleia alternifolia</i>	G. D. M.	8/51	f1	0
1064	"	"	8/51	1	0
1304	<i>Strychnos spinosa</i>	C. G. F.	8/51	fr	-
				0	
		LOTHARIACEAE			
1887	<i>Phoradendron</i> sp.	Colonia Callas, B.C., Mex.	11/51	t	+
				+	0
		LYCOPODIACEAE			
1238	<i>Lycopodium complanatum</i> var. <i>flabelliforme</i>	Burtonsville, Md.	8/51	w	0
				+	+
		LYTHRACEAE			
1425	<i>Lagerstroemia floribunda</i>	Savannah, Ga.	9/51	1, fr	-
1307	"	G. D. M.	9/51	f1	0
1308	"	"	9/51	1	0
1381	"	Raleigh, N. C. (cult.)	9/51	fr	+
1975	"	C. G. F. (cult.)	11/51	1, fr	0
1438	<i>Lawsonia inermis</i>	Savannah, Ga. (cult.)	9/51	1, s, fr	0
				0	+
		MAGNOLIACEAE			
1958	<i>Liriodendron tulipifera</i>	Silver Spring, Md.	11/51	1, s	-
1810	<i>Magnolia stellata</i>	G. D. M.	10/51	1	0
		MALPIGHIAEAE			
1222	<i>Byrsinima crassifolia</i>	C. G. F.	8/51	1, s, fr	+
1437	<i>Malpighia punicifolia</i>	Savannah, Ga.	9/51	1, fr	0
1282	<i>Mascagnia macroptera</i>	Alamos, Son., Mex.	8/51	-	0
		MALVACEAE			
1895	<i>Abutilon sonorae</i>	Sierra Laguna, B. C., Mex.	11/51	1	0
1454	<i>Hibiscus cannabinus</i>	G. D. M.	9/51	fr	0
1356	"	"	9/51	r	0

TABLE I. CONT. - PAGE 23

Collection

Access- ion No.	Species	Source	Sapogenins								
			Date col- lect- ed	Lect- er	Plant part	Hemo- lytic test	Total m.f.b. g	Identified % of total	Flavo- nols	Alka- loids	Tan- nins
M A L V A C E A E											
1427	<i>Hibiscus platanifolius</i>	Savannah, Ga. (cult.)	9/51	1, S	-	0	0	0	0	++	
1781	<i>Hibiscus rosa-sinensis</i>	C. G. F.	10/51	1, f	-	0	0	0	0	++	
1783	<i>Malvaviscus mollis</i>	" "	10/51	1, f	-	0	0	0	0	0	
1434	<i>Theespesia populnea</i>	Savannah, Ga.	9/51	1, fr	+	0	0	0	0	++	
M A R T Y N I A C E A E											
1288	<i>Martynia sp.</i>	San Bernardo, Son., Mex.	8/51	r	-	0	0	0	0	0	
M E L I A C E A E											
1826	<i>Cipadessa baccifera</i>	C. G. F. Savannah, Ga. (cult.)	11/51	1° fl, fr	-	0	0	0	0	+	
1416	<i>Melia azedarach</i>	C. G. F.	9/51	1° fr	-	0	0	0	0	++	
1862	<i>Swietenia mahogani</i>		11/51	1° fr	-	0	0	0	0	+	
M E N I S P E R M A C E A E											
1460	<i>Stephania cephalaria</i>	G. D. M.	9/51	1, s	+	0	0	++	0	0	
M O R A C E A E											
1302	<i>Brosimum alicastrum</i>	C. G. F. Puerto Lopez, Intendencia del Meta, Colombia	8/51	1° fr	+	0	0	0	0	++	
1604	<i>Cecropia guarumo</i>	91 km. N.W. of Las Guacamayos, Colombia	10/51	yw	-	0	0	0	0	++	
1606	" sp.	Colombia, S. A.	10/51	yw	-	0	0	0	0	++	
1964	<i>Coussapoa sp.</i>	C. G. F.	11/51	1° s, fr	-	0	+	0	+	++	
1221	<i>Ficus auriculata</i>		8/51	1° s, fr	-	0	0	0	0	+	
1220	" fulve	" "	8/51	1° s, fr	-	0	0	0	0	++	
1618	<i>myrsinaceifolia</i> subrepanda	" "	10/51	1	-	0	0	0	0	0	
	" pumila	" "	10/51	1	-	0	0	0	0	++	
1576	" sp.	" "	9/51	1° fr	+	0	0	0	0	0	
1164	<i>Macaranga pomifera</i>	Beltsville, Md.	8/51	fr	+	0	0	0	0	0	
1562	<i>Morus alba</i>	G. D. M.	9/51	1	-	0	+	0	0	0	
1642	" <i>australis</i>	" "	10/51	1	-	0	+	0	0	0	
1970	" <i>rubra</i>	Silver Spring, Md.	11/51	1, s	+	0	0	0	0	0	
M U S A C E A E											
1542	<i>Heliconia sp.</i>	Santiago de Tuxtla, Ver., Mex.	9/51	1	+	0	0	0	0	0	
1097	" "	Autlan, Jal., Mex.	8/51	rh	+	0.9 mi	0	0	0	0	

TABLE I. CONT. - PAGE 24

TABLE I. CONT. - PART 25

Accession No.	Species	Source	Saponines				Flavo-	Alka-	Tann-	Ster-
			Date coll-	Plant part	Hemo-	Total m.f.b.,	Identified, % of total,	nols	iods	nins
OLEACEAE										
1683-B	<i>Ligustrum compactum</i>	G. D. M. Raleigh, N. C.	10/51	1	-	0	+	0	+	++
1383-A	<i>Ligustrum japonicum</i>	G. D. M. sp.	9/51	fr	-	0	0	0	0	++
1383-B	<i>Olea europaea</i>	G. D. M. sp.	9/51	fr	-	0	0	0	0	++
1365-A	<i>Moronia emarginata</i>	C. G. F. Chico, Cal.	11/51	1, fr	-	0	0	0	0	++
1365-B	<i>Olea europaea</i>	Murrieta, Cal. (cult.) Chico, Cal.	11/51	1	+	0	0	0	0	++
1832	<i>Phillyrea latifolia</i>	G. D. M. var. media	11/51	fr	-	0	0	0	0	+
1937	<i>Syringa oblata</i>	G. D. M. sp.	10/51	1	-	0	+	0	0	+
1470										
1848										
1908										
1686										
ONAGRACEAE										
1235	<i>Circaea quadrifolia</i>	Burtonsville, Md. Beltsville, Md.	8/51	w, fr	+	0	0	0	+++	++
1589	<i>Oenothera biennis</i>	Burtonsville, Md.	10/51	w, fr	-	0	0	0	++	+
OROBANCACEAE										
1595	<i>Epinagus virginiana</i>	Beltsville, Md.	10/51	w, fr	-	0	0	0	++	0
ORCHIDACEAE										
1199	<i>Ophiopogon planiscapus</i>	Burtonsville, Md.	8/51	r	+	0	0	0	0	0
1200	<i>Ophiopogon planiscapus</i>	G. D. M. var. leucanthus	8/51	1	+	0	+	0	0	+++
OSMUNDACEAE										
1598	<i>Osmunda cinnamomea</i>	Beltsville, Md.	10/51	1	-	0	+	0	0	+
1599			10/51	rh	-	0	0	0	0	0
PALMACE										
1790	<i>Chrysallidocarpus madagascariense</i>	C. G. F. Coccothrinax crinita	10/51	1, fr	-	0	+	0	0	++
1298	<i>Dictyosperma grandis</i>	G. D. M. sp.	8/51	s, fr	+	0	0	0	0	++
1428	<i>Phoenix farinifera</i>	Savannah, Ga. (cult.) G. D. M.	9/51	1, s	-	0	+	0	0	+++
1861	<i>Phoenix tomentosa</i>	G. D. M.	11/51	1, fr	-	0	0	0	0	+
1584	<i>Sabal palmetto</i>	G. D. M.	9/51	1, fr	-	0	+	0	0	++
1791	<i>Thrinax wendlandiana</i>	G. D. M.	10/51	1, fr	-	0	+	0	0	++
1429			9/51	1	-	0	0	0	0	0

TABLE I. CONT. - PAGE 26
PANDANACEAE

1697	<i>Pandanus polycephalus</i>	C. G. F.	10/51	1, fr	-	0	0	0	0	0	0
PASSIFLORACEAE											
1380	<i>Passiflora incarnata</i>	Raleigh, N. C.	9/51	w	+	0	0	0	0	0	+
PHYTOLACCACEAE											
1402	<i>Phytolacca americana</i>	Raleigh, N. C. Beltsville, Md.	9/51	1, fr	-	0	0	0	0	0	++
1152	"	"	8/51	r, fr	+	0	0	0	0	0	++
1153	"	"	8/51	r	+	0	0	0	0	0	+
1154	"	"	8/51	s	+	0	0	0	0	0	++
PINACEAE											
1490	<i>Cedrus libani</i>	Chico, Cal. G. D. M.	9/51	1	+	0	0	0	0	0	++
1987	<i>Larix</i> sp.	"	11/51	1	-	0	0	0	0	0	++
PITTOSPORACEAE											
1853	<i>Pittosporum pentandrum</i>	C. G. F.	11/51	1	+	0	0	0	0	0	++
PLANTAGINACEAE											
1236	<i>Plantago rigellii</i>	Burtonsville, Md. " " Antigo, Wisc.	8/51	r, fr	+	0	0	0	0	0	+++
1237	"	"	8/51	1, fr	+	0	0	0	0	0	++
1711	sp.	"	10/51	1	+	0	0	0	0	0	++
POLYGONACEAE											
1896	<i>Antigonon leptopus</i>	Sierra Laguna, B.C., Mex. C. G. F.	11/51	1	-	0	0	0	0	0	++
1698	<i>Eriogonum fasciculatum</i>	Ensenada, B. C., Mex.	10/51	1, fl	-	0	0	0	0	0	++
1527	<i>Polygonum affinissimum</i>	G. D. M.	9/51	1	+	0	0	0	0	0	++
1263	<i>Polygonum bistortoides</i>	Bearooth Pass, Wyo.	8/51	r, s, fl	+	0	0	0	0	0	++
1186	"	Beartooth Pass, Wyo.	8/51	w	-	0	0	0	0	0	0
1587	"	Beartsville, Md.	10/51	w, fr	-	0	0	0	0	0	+
POLYPODIACEAE											
1232	<i>Polystichum acrostichoides</i>	Burtonsville, Md. " "	8/51	w	+	0	0	0	0	0	++
1233	"	"	8/51	r, h	-	0	0	0	0	0	++
PUNICACEAE											
1938	<i>Punica granatum</i>	Chico, Cal. " "	11/51	1	+	0	0	0	0	0	++
1849	"	"	11/51	r	+	0	0	0	0	0	++
PYROLACEAE											
1156	<i>Chimaphila maculata</i>	Beltsville, Md.	8/51	w	+	0	0	0	0	0	++

TABLE I. - CONT. - PAGE 27

Collection	Accession No.	Species	Source	Saponins					Flavo-nols	Alka-loids	Tannins	Sterols
				Date collected	Plant part	Hemolysis test	Total m.o.f.b., % of total	Identified, % of total				
RANUNCULACEAE												
1906	Clematis recta	G. D. M.	11/51	1	+	0	0	0	0	+	++	
1586	virginiana	Beltsville, Md.	10/51	f1, fr	+	0	0	0	0	0	+	
1956	Ceanothus americanus	Silver Spring, Md.	11/51	1, s	-	0	0	0	0	0	+++	
1636	sp.	G. D. M.	10/51	1	-	0	0	0	0	0	+++	0
1331	Karwinskya humboldtiana	Aalamos Son., Mex.	8/51	1	-	0	0	0	0	0	+++	
1933	Rhamnus davurica	G. D. M.	11/51	1	-	0	0	0	0	0	+++	
1488	utilis	Chico, Cal.	9/51	1	+	0	0	0	0	0	++	0
1489	Ziziphus jujuba	"	9/51	fr	+	0	0	0	0	0	0	
1941	"	"	11/51	1	-	0	0	0	0	0	0	
1852	"	"	11/51	fr	-	0	0	0	0	0	0	
1954	"	mauritiana	c. G. F.	11/51	f1	-	0	0	0	0	0	++
ROSACEAE												
1486	Adenostoma fasciculatum	Murrieta, Cal.	9/51	1	-	0	0	0	0	0	++	
1234	Agrimonia parviflora	Burtonsville, Md.	8/51	w	+	0	0	0	0	0	++	
1211	Aronia arbutifolia	Highlands, N. C.	8/51	1, s, fr	+	0	0	0	0	0	++	
1500-A	sp.	G. D. M.	9/51	fr	+	0	0	0	0	0	0	
1500-B	"	"	9/51	1	-	0	0	0	0	0	+	
1709	Cerocarpus betuloides	Chico, Cal.	10/51	1	-	0	0	0	0	0	++	
1252	Chaenomeles sp.	G. D. M.	8/51	fr	+	0	0	0	0	0	0	
1362-A	Cotoneaster foveolata	"	9/52	fr	-	0	0	0	0	0	+	
1362-B	"	"	9/51	1	-	0	0	0	0	0	++	
1841	Crataegus azarolus	Chico, Cal.	11/51	fr	-	0	0	0	0	0	++	
1847	douglasii	"	11/51	1, fr	+	0	0	0	0	0	++	
1842	durobrivensis	"	11/51	1	-	0	0	0	0	0	++	
1843	"	"	11/51	fr	+	0	0	0	0	0	++	
1844	lavallei	"	11/51	frc	+	0	0	0	0	0	++	
1845	"	"	11/51	1	-	0	0	0	0	0	++	
1846	Eriobotrya monogyna	"	11/51	1, fr	-	0	0	0	0	0	++	
1877	Eriobotrya japonica	C. G. F.	9/51	1, fr	-	0	0	0	0	0	++	
1227	Licania rigidida	"	8/51	w	-	0	0	0	0	0	++	
1626	Malus kaido	Chico, Cal.	10/51	1	+	0	0	0	0	0	0	
1627	"	"	10/51	fr	+	0	0	0	0	0	0	
1628	"	"	10/51	1	+	0	0	0	0	0	++	
1629	"	"	10/51	fr	-	0	0	0	0	0	++	
1318	sieboldii	G. D. M.	8/51	1	-	0	0	0	0	0	++	
1317	"	"	8/51	fr	-	0	0	0	0	0	++	
1499	sp.	"	9/51	1	-	0	0	0	0	0	++	

TABLE I. CONT. - PAGE 28

ROSACEAE					
G.	D.	M.			
1501-A <i>Malus</i> sp.	"	"	9/51	fr	+
1501-B "	"	"	9/51	+	0
1914 <i>Neillia longiracemosa</i>	"	"	11/51	+	++
1640	"	"	10/51	+	++
1643 <i>Photinia parvifolia</i>	"	"	10/51	fr	0
1644	"	"	10/51	1	0
1573 <i>Prunus serrulata</i>	"	"	9/51	1	0
1453 " <i>subhirtella</i>	"	"	9/51	1	0
1502 " <i>sp.</i>	"	"	9/51	1	0
1309 " <i>Pyracantha crenulata</i>	"	"	8/51	1	0
1310 " <i>Rosaceae</i>	"	"	8/51	fr	0
1455 <i>Pyrus ussuriensis</i>	"	"	9/51	1	0
1456 " <i>calleryana</i>	"	"	9/51	fr	0
1315 " <i>bumalda</i> Anth.	"	"	8/51	fr	0
1316 " <i>Rhodotypos scandens</i>	"	"	8/51	1	0
1923 <i>Rosa</i> sp.	"	"	11/51	1	0
1366	"	"	9/51	fr	0
1905 <i>Sorbus alnifolia</i>	"	"	11/51	1	0
1207 <i>Spiraea alba</i>	"	"	8/51	1, s, fr	0
1120 " <i>Waterer</i>	"	"	8/51	fr	0
1684 <i>Stranvaesia davidiana</i>	G.	D. M.	10/51	1	0
1421 <i>Ixora coccinea</i>	C.	G. F.	9/51	1, s, fr	0
1422 " <i>macrorhyncha</i>	"	"	9/51	1, s	0
1827 <i>Nauclea esculenta</i>	"	"	11/51	1, fr	0
1979 " <i>orientalis</i>	"	"	11/51	1, fr	0
RUBACEAE					
1918 <i>Boenninghausenia</i>	G. D. M.		9/51	1, s, fr	0
1625 <i>albiflora</i>	Chico, Cai		10/51	1, s	0
1327 <i>Citrus grandis</i>	"		9/51	1, s	0
1326 " <i>limonia</i>	"		9/51	fr	0
1325 " <i>sinensis</i>	"		9/51	fr	0
1061 <i>Evodia hupehensis</i>	G. D. M.		8/51	yfr	0
1062 " <i>sp.</i>	"		8/51	1	0
1784 <i>Murraya paniculata</i>	C. G. F.		10/51	1, fr	0
1419 " <i>exotica</i>	"		9/51	1	0
1363 <i>Phellodendron</i> sp.	G. D. M.		9/51	1	0
1352 <i>Zanthoxyylum bungei</i>	Beitsville, Md.		9/51	1	0
1353 " <i>palmeri</i>	Sierra Laguna, B.C., Mex.		9/51	fr	0
			11/51	1	0

TABLE I. CONT. - PAGE 29

Collection			Saponins								
Accession No.	Species	Source	Date collected	Plant part	Hemolytic test	Total m.f.b., g.	% of total identified	Flavonoids	Alkaloids	Tannins	Sterols
S A L I C A C E A E											
1067	<i>Populus berolinensis</i>	Chico, Cal.	8/51	1	-	0	0	0	0	0	+++
1182	var. <i>rossica</i>	"	8/51	1	-	0	0	0	0	+	++
1258	<i>Salix nigra</i> sp.	Silver Spring, Md. G. D. M.	11/51	1, s	-	0	+	0	++	+	++
1911			11/51	1	+	0	+	0	+	+	+
S A N T A L A C E A E											
1204	<i>Pyrularia pubens</i>	Highlands, N. C.	8/51	fr	+	0	0	0	0	0	0
S A P I N D A C E A E											
1171	<i>Blighia sapida</i>	C. G. F.	8/51	1, fr	+	0	0	0	0	0	++
1165	<i>Dimocarpus longan</i>	" "	8/51	fr	-	0	0	0	0	0	+++
1955	<i>Koelreuteria bipinnata</i>	" "	11/51	fr	+	0	0	0	0	0	++
1696	"	" "	10/51	1, fl	+	0	+	0	0	0	++
1695	<i>formosana</i>	" "	10/51	1, fr	-	0	+	0	0	0	++
1129	<i>Litchi chinensis</i>	" "	8/51	1, fr	+	0	0	0	0	0	++
1976	<i>Paullinia leiocarpa</i>	Silver Spring, Md.	11/51	1, fr	-	0	+	0	0	0	++
S A P O T A C E A E											
1166	<i>Achras sapota</i>	C. G. F.	8/51	1, fr	-	0	0	0	0	0	++
1831	<i>Lucuma nervosa</i>	" "	11/51	1, fr	-	0	0	0	0	0	++
1128	<i>Salicifolia</i>	" "	8/51	1, fr	+	0	+	0	0	0	++
1667	<i>Mimusops balata</i>	" "	10/51	1	-	0	0	0	0	0	++
1830	" <i>elengi</i>	" "	11/51	1, fr	-	0	0	0	0	0	+
S A X I F R A G A C E A E											
1570	<i>Deutzia</i> sp.	G. D. M.	9/51	fr	-	0	0	0	0	0	+
1569	<i>Hydrangea petiolaris</i>	" "	9/51	1	-	0	+	0	0	0	+++
1110	"	" "	8/51	1	+	0	0	0	0	0	++
1111	" <i>radiata</i>	Highlands, N. C.	8/51	f1	-	0	+	0	0	0	++
1202			8/51	1, s, fr	-	0	+	0	0	0	++
1360-A	<i>Philadelphus henryi</i>	G. D. M.	9/51	fr	-	0	0	0	0	0	++
1360-B	" <i>Ribes manshuricum</i>	" "	9/51	1	-	0	0	0	0	0	+
1919			11/51	1	-	0	0	0	0	0	0

TABLE I. CONT., - PAGE 30

SCROPHULARIACEAE

1210	<i>Chelone cuthbertii</i>	Highlands, N. C.	8/51 1, s, fl -	0	0	+++
1209	" <i>lynnii</i> ligustrina	"	8/51 1, s, fr -	0	0	+++
1623	<i>Paulownia fortunei</i>	Chico, Cal.	10/51 1, s, fr -	0	0	++
1928-A	" <i>tomentosa</i>	G. D. M.	11/51 fr +	0	0	0
1928-B	" "	" "	11/51 1 +	0	0	+

SIMAROUBACEAE

1266	<i>Ailanthus glandosum</i>	Chico, Cal.	8/51 1 -	0	0	+++
1267	" <i>umbraculifera</i>	"	8/51 fr +	0	0	0
1127	<i>Picramnia pentandra</i>	C. G. F. Beltsville, Md.	8/51 1, fr +	0	0	0
1355	<i>Picrasma quissoides</i>	"	9/51 1 -	0	0	0

SOLANACEAE

1478	<i>Datura meteloides</i>	Murrieta, Cal.	9/51 s -	0	0	++
1523	<i>Nicotiana glauca</i>	Ensenado, B. C., Mex.	9/51 1 +	0	0	+++
1936-A	<i>Solanum abutiloides</i>	G. D. M.	11/51 s -	0	0	+
1936-B	" "	"	11/51 r -	0	0	"
1936-C	" "	"	11/51 1 -	0	0	+
1150	" <i>carolinense</i>	Beltsville, Md.	8/51 1, s, +	0	0	++
1151	" <i>quitoensis</i>	G. F. " " "	8/51 fr -	0	0	++
1935-A	" "	" "	11/51 r -	0	0	++
1935-B	" "	" "	11/51 1 +	0	0	++
1904-0	" <i>Xanthocarpum</i>	Merck Ind Co.	11/51 sd +	0	0	+
1-89	" sp.	G. D. M.	11/51 fr +	0	0	0

SPARGANIACEAE

1214	<i>Sparganium americanum</i>	High nds, N. C.	8/51 1, fr -	0	0	+++
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STERCULIACEAE

1855	<i>Dombeya dregeana</i>	C. G. F. Klei h'vea hospita	1/5 1, f -	0	0	++
1615	"	"	10/51 1, f -	0	0	++

STYRACACEAE

1639	<i>Styrax japonica</i>	G. D. M.	10/51 1 +	0	0	++
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SYMPLOCACEAE

1 5	<i>Symplocos paniculata</i>	Beltsville, Md.	9/51 1 +	0	0	+++
1 51	"	"	9/51 fr +	0	0	++

TAMARIACEAE

1435	<i>Myricaria floribunda</i>	Savannah, Ga. (cult.)	9/51 1, fr -	0	0	+++
1988	<i>Tamarix juniperina</i>	G. D. M.	11/51 1 -	0	0	++
1487	" <i>aphylla</i>	Sacaton, Ariz.	9/51 1 -	0	0	+

TABLE I. CONT. - PAGE 31

Collection

TABLE I. CONT. - PAGE 32
UMBELLIFERAE

1240	<i>Cryptotaenia canadensis</i>	Burtonsville, Md.	8/r, 1 8/51	+	0	0	0
1245	<i>Daucus carota</i>	"	s, r 8/51	+	+	0	+
1246	"	"	s, r 8/51	-	0	0	+
1205	<i>Oxypolis rigidior</i>	Highlands, N. C.	1, s, f1 8/51	+	0	0	++
1408	<i>Boumeria nivea</i>	Savannah, Ga. (cult.)	9/51 9/51	1 1	-	0	++
1409	"	"	"	-	0	0	0
					0	0	0
					0	0	0
1982	<i>Callicarpa affinis</i>	C. G. F.	1, f1, fr 11/51	0	0	0	++
1863	" <i>americana</i>	"	1, fr 11/51	+	0	0	+
1904	" <i>sp.</i>	G. D. M.	1, fr 11/51	-	0	0	+
1581	<i>Citharexylum sp.</i>	C. G. F.	1, fr 9/51	-	0	0	+
1620	<i>Duranta repens</i>	"	1, fr 10/51	+	0	0	+
1980	<i>Prerna odoratus</i>	"	1, f1, fr 11/51	+	0	0	+
1868	<i>Tectona grandis</i>	"	1, fr 11/51	+	0	0	++
1440	<i>Vitex parviflora</i>	"	1, fr 9/51	+	0	0	++
					0	0	0
					0	0	0
					0	0	0
					0	0	0
1140	<i>Ampelopsis quinquefolium</i>	Beltsville, Md.	8/51 8/51	1, s r	+	0	++
1111	" ?	18-20 mi. S.W. of Autlan, Jal., Mex.	t	0	0	0	+
1101	" ?	Jal., Mex.	0	0	0	0	0
1545	<i>Renealmia sp.</i>	Chiltepec, Oax., Mex.	9/51 9/51	1 1	+	0	0
		ZINGIBERACEAE					
1468	<i>Larrea tridentata</i>	Sacaton, Ariz.	9/51 9/51	1 s	+	0	0
1485	"	"	"	"	0	0	+
		ZYGOPHYLLACEAE					

* LEAF POWDER OBTAINED AS BY-PRODUCT IN MANUFACTURE OF YUCCA FIBER